

loop in the southwestern Gulf of Mexico and then began to move slowly north-northeastward. On the afternoon of the 15th the first vessel report from the vicinity of the center was received, the S.S. *Belfast Maru*, about 240 miles south of the Louisiana coast, reporting a wind velocity of 70 miles from the south-southeast and a barometer reading of 28.76 inches. The following warning was immediately issued:

Hoist northeast storm warnings 4 p.m. Pensacola, Fla., to Morgan City, La. Tropical disturbance central 1 p.m. about 26° N. and 96° 40 minutes W. moving slowly north-northeastward attended by shifting gales and probably by winds of hurricane force near center. Caution advised vessels in path. Present indications are that center will reach eastern Louisiana coastline Saturday afternoon or night.

Hurricane warnings were ordered the next morning between Grand Isle and Vermilion Bay, La. As the storm approached the Louisiana coast, its rate of movement increased and Dr. I. M. Cline, of the Weather Bureau at New Orleans, reports that between Jeanerette

and Baton Rouge, La., it traveled about 27 miles per hour—an unusually rapid rate. It crossed the coastline a short distance west of Morgan City, which reported a barometer reading of 28.9 inches and a wind velocity of 68 miles from the southeast at 2 p.m. The center passed over Jeanerette, Iberia Parish, where a calm and a barometer reading of 28.58 inches occurred from 2 p.m. to 2:45 p.m. The center passed slightly to the west of Baton Rouge about 4:10 p.m. with a barometer reading there of 28.8 inches. Six persons in Louisiana were killed and damage to property amounted to about \$2,605,000.

The storm, slowly decreasing in intensity, moved northeastward during the next few days, giving needed rainfall to the North and Middle Atlantic States, and passed over central Maryland on the 19th. A maximum wind velocity of 50 miles per hour was recorded at Atlantic City, N.J. It passed beyond the field of observation over northern Greenland on the 23d.

BIBLIOGRAPHY

C. FITZHUGH TALMAN, *in charge of Library*

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Anderson, Abram E.

Sand fulgurites from Nebraska. Their structure and formative factors. 1925. p. 49-86. illus. 22½ cm. (Nebraska state museum. Bulletin 7, v. 1, June 1925.)

Barbour, Erwin Hinckley.

Notes on Nebraska fulgurites. 1925. p. 45-48. illus. 22½ cm. (Nebraska state museum. Bulletin 6, v. 1, June 1925.)

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SOLAR OBSERVATIONS

SOLAR AND SKY RADIATION MEASUREMENTS DURING JUNE 1934

By IRVING F. HAND, *Assistant in Solar Radiation Investigations*

For a description of instruments employed and their exposures, the reader is referred to the January 1932 REVIEW, page 26.

Table 1 shows that solar radiation intensities averaged above normal for June at Madison and close to normal at Washington and Lincoln.

Beginning with this issue, summaries of the total radiation (direct + diffuse) received on a horizontal surface at the University of Washington Oceanographic Laboratory, Friday Harbor, Washington (latitude 48° 32' N., longitude 123° 01' W.; height above sea level 4.37 meters), will be regularly included in table 2 through the kind cooperation of Dr. C. L. Utterback. The radiation equipment at that station comprises an Eppley

pyrheliometer (no. 262) recording on an Engelhard microammeter (no. 30737). Table 2-A gives the radiation values from this station for the International Polar Year, July 30, 1932, to August 19, 1933, inclusive.

Table 2 shows an excess in the total solar radiation received on a horizontal surface at all stations with the exception of Pittsburgh and Miami.

Beginning with this month, *air mass* types will be indicated with screened radiation measurements, as shown in the last column of table 3.

Polarization measurements made on 4 days at Washington give a mean of 56 percent with a maximum of 57 percent on the 28th. At Madison, measurements made on 7 days give a mean of 65 percent with a maximum of 70 percent on the 21st. The values for Washington are slightly below normal for June, while those at Madison are above normal.